

ORIGINAL



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BEFORE THE ARIZONA CORPORATION COMMISSION

3252

COMMISSIONERS

- MIKE GLEASON, Chairman
- WILLIAM A. MUNDELL
- JEFF HATCH-MILLER
- KRISTIN K. MAYES
- GARY PIERCE

IN THE MATTER OF THE APPLICATION OF
 ARIZONA-AMERICAN WATER COMPANY
 FOR A DETERMINATION OF THE
 CURRENT FAIR VALUE OF ITS UTILITY
 PLANT AND PROPERTY AND FOR
 INCREASES IN ITS RATES AND CHARGES
 BASED THEREON FOR UTILITY SERVICE
 BY ITS SUN CITY WATER DISTRICT.

DOCKET NO. W-01303A-07-0209

**NOTICE OF FILING
STAFF'S SURREBUTTAL TESTIMONY**

Staff of the Arizona Corporation Commission hereby files the following Surrebuttal Testimony:

1. Alexander I. Igwe;
2. Dorothy Hains;
3. Steve P. Irvine's Surrebuttal Testimony on Cost of Capital; and
4. Steve P. Irvine's Surrebuttal Testimony on Rate Design.

RESPECTFULLY SUBMITTED this 14th day of December, 2007.

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Original and thirteen (13) copies of the foregoing were filed this 14th day of December, 2007 with:

Docket Control
 Arizona Corporation Commission
 1200 West Washington Street
 Phoenix, Arizona 85007

Arizona Corporation Commission
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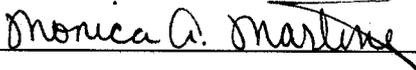
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SURREBUTTAL

TESTIMONY

OF

ALEXANDER I. IGWE

DOROTHY HAINS

STEVE IRVINE – COST OF CAPITAL

STEVE IRVINE – RATE DESIGN

DOCKET NO. W-01303A-07-0209

**IN THE MATTER OF THE APPLICATION OF
ARIZONA-AMERICAN WATER COMPANY, AN
ARIZONA CORPORATION, FOR A
DETERMINATION OF THE CURRENT FAIR VALUE
OF ITS UTILITY PLANT AND PROPERTY AND FOR
INCREASES IN ITS RATES AND CHARGES BASED
THEREON FOR THE UTILITY SERVICE BY ITS
SUN CITY WATER DISTRICT**

DECEMBER 14, 2007

BEFORE THE ARIZONA CORPORATION COMMISSION

MIKE GLEASON
Chairman
WILLIAM A. MUNDEL
Commissioner
JEFF HATCH-MILLER
Commissioner
KRISTIN K. MAYES
Commissioner
GARY PIERCE
Commissioner

IN THE MATTER OF THE APPLICATION OF) DOCKET NO. W-01303A-07-0209
ARIZONA-AMERICAN WATER COMPANY, AN)
ARIZONA CORPORATION, FOR A)
DETERMINATION OF THE CURRENT FAIR VALUE)
OF ITS UTILITY PLANT AND PROPERTY AND FOR)
INCREASES IN ITS RATES AND CHARGES BASED)
THEREON FOR THE UTILITY SERVICE BY ITS)
SUN CITY WATER DISTRICT)

SURREBUTTAL

TESTIMONY

OF

ALEXANDER IBHADE IGWE

EXECUTIVE CONSULTANT III

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

DECEMBER 14, 2007

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EXECUTIVE SUMMARY
ARIZONA-AMERICAN WATER COMPANY – SUN CITY WATER DISTRICT
DOCKET NO. W-01303A-07-0209

The Surrebuttal Testimony of Staff witness Alexander Ibhade Igwe addresses the following issues:

Public Safety Surcharge: The Company's purported disagreement with Staff's recommendation regarding Fire-flow Cost Recovery Mechanism is premature. Staff notes that all elements relating to the projects will be subject to proper scrutiny each time it completes a phase and files for implementation of a surcharge. Such scrutiny will include inspection of completed projects, audit of financial records relating to the project, earnings test and any other procedure deemed appropriate by interested parties in such future proceedings. However, Staff reaffirms that its costs estimate of \$2.7 million is appropriate for the Company's proposed public safety improvement projects.

Revenue Requirement: Staff recommends a revenue requirement of \$9,632,551, resulting in an operating income of \$1,922,490 or a 7.60 percent rate of return on an Original Cost Rate Base ("OCRB") of \$25,295,921. Staff's recommendation is \$38,518 less than the Company's proposal of \$9,671,069. The Company's proposal results in an operating income of \$1,912,095 or a rate of return of 7.69 percent on an OCRB of \$24,960,997.

Rate Base: Staff's recommended OCRB of \$25,295,921 reflects the transfer of the Eastern Division plant to the Mohave District. Staff reaffirms that its calculation of accumulated depreciation appropriately corrects for accounting errors in the Company's financial records for plant items disallowed in the 2001 rate case.

Operating Income: Based on the Company's acceptance of the Residential Utility Consumer Office's operating income adjustments relating to fuel and purchased power, as well as waster disposal, Staff has incorporated those adjustments in its surrebuttal filing. Staff has accepted the Company's proposed rate case expense and depreciation expense. Also, Staff has reflected an appropriate level of the Company's proposed tank painting expense in its determination of revenue requirement. Because the Company intends to file its next rate case in 2012, Staff has normalized its recommended rate case expense and tank maintenance expense over four years. Staff's revisions result in an adjusted test year operating income of \$734,820.

1 **INTRODUCTION**

2 **Q. Please state your name and business address.**

3 A. My name is Alexander Ihade Igwe. My business address is 1200 West Washington
4 Street, Phoenix, Arizona 85007.

5
6 **Q. Are you the same Alexander Ihade Igwe who filed Direct Testimony on rate base
7 and revenue requirement on October 15, 2007?**

8 A. Yes.
9

10 **PURPOSE OF TESTIMONY**

11 **Q. Briefly describe the purpose of your Surrebuttal Testimony in this instance.**

12 A. My Surrebuttal Testimony presents Staff's position on issues raised by Arizona-American
13 Water Company ("Arizona-American" or "Company") in its Rebuttal Testimony on rate
14 base, revenue requirement and Public Safety projects.
15

16 **REVENUE REQUIREMENT**

17 **Q. Please summarize Staff's revised recommendation regarding revenue requirement.**

18 A. Staff recommends a revised revenue requirement of \$9,632,551, which results in an
19 operating income of \$1,922,490 or a rate of return of 7.60 percent on an Original Cost
20 Rate Base ("OCRB") of \$25,295,921. Staff's recommendation is \$38,518 less than the
21 Company's proposal of \$9,671,069. The Company's proposal results in an operating
22 income of \$1,912,095 or a rate of return of 7.69 percent on an OCRB of \$24,960,997.
23

1 **RESPONSE TO REBUTTAL TESTIMONY OF THOMAS M. BRODERICK**

2 ***PUBLIC SAFETY SURCHARGE***

3 **Q. Has the Company accepted Staff's recommendation regarding Fire-Flow Surcharge**
4 **Mechanism?**

5 A. Based on Mr. Broderick's Rebuttal Testimony, it appears that the Company has accepted
6 Staff's recommendation to adopt a Fire-Flow Cost Recovery Mechanism ("FCRM") that
7 is consistent with the Arizona Corporation Commission ("Commission") approved
8 Arsenic Remediation Cost Recovery Mechanism ("ACRM"). However, the Company has
9 indicated some disagreements with Staff's costs estimate for implementing its proposed
10 public safety projects.

11
12 **Q. What is the Company's disagreement with Staff's suggested cost estimates for its**
13 **proposed public safety projects?**

14 A. The Company is concerned about Staff's costs estimate of approximately \$2.7 million
15 because it is less than its projected cost of \$4.9 million. Staff reaffirms that its estimate of
16 \$2.7 million is representative of an appropriate level of costs necessary to effectuate the
17 Company's proposed public safety projects. However, Staff concedes that its costs
18 estimate of \$2.7 million may not represent the worst-case scenario.

19
20 **Q. Is it necessary to establish a specific cost for the Company's proposed public safety**
21 **projects in this proceeding?**

22 A. No. Staff finds that it is premature to establish or argue for a specific cost for the
23 Company's proposed public safety improvements projects, in this instant proceeding.
24 Consistent with the methodology established for arsenic remediation cost recovery, the
25 Company's actual costs of implementing its proposed public safety projects will be

1 subject to prudence review each time it files for implementation of a public safety
2 surcharge. During each filing, the Company's completed projects will be examined for
3 used and usefulness, and for reasonableness of incurred costs.

4
5 **Q. Did Staff misunderstand Arizona-American's rate design for the fire-flow**
6 **surcharge?**

7 A. No. Again, it is Staff's position that any discussions relating to rate design for public
8 safety surcharge be deferred to future proceedings when Arizona-American seeks
9 recovery of actual costs.

10
11 ***RATE CASE EXPENSE***

12 **Q. Please comment on the Company's revised rate case expense.**

13 A. Staff has accepted the Company's revised rate case expense or regulatory expense.
14 Consistent with Mr. Broderick's assertion that the next rate case will be filed no later than
15 May 31, 2012, Staff recommends normalizing the Company's rate case expense over four
16 years. Please see Broderick at page 9, lines 6 and 7.

17
18 **Q. What is the impact of Staff's recommendation on rate case expense?**

19 A. As shown on Surrebuttal Schedule AII-4, Staff's recommendation results in a rate case
20 expense of \$23,566, \$926 less than Staff's prior recommendation of \$24,492. Staff's
21 recommendation is \$7,856 less than the Company's proposal of \$31,422, due to its
22 proposal to amortize the same level of rate case expense over three years.

1 **RESPONSE TO REBUTTAL TESTIMONY OF LINDA GUTOWSKI**

2 ***RATE BASE***

3 **Q. Please comment on the Company's revised rate base.**

4 A. The Company states in its rebuttal testimony that except for Staff's recommended level of
5 accumulated depreciation, it has accepted Staff's adjustments to its filed rate base.

6
7 *Accumulated Depreciation*

8 **Q. What is the Company's exception to Staff's recommended level of accumulated
9 depreciation?**

10 A. The Company claims that Staff's calculation of accumulated depreciation is inappropriate
11 because it did not include accumulated depreciation for the intervening years between the
12 prior test year end (December 2001) and the effective date of Commission Order
13 ("Order") in that proceeding. The Company argues that since the Order in the last
14 proceeding was dated July 2004, plant items disallowed by the Order should be removed
15 from rate base on the effective date. Please see Gutowski, at page 2, Lines 5 – 11. Based
16 on this premise, the Company contends that accumulated depreciation in this proceeding
17 should be accrued for plant items denied in the last proceeding, from December 2001
18 through July 2004.

19
20 **Q. What is the impact of the Company's adopted theory on its calculated accumulated
21 depreciation?**

22 A. The Company's method results in an accumulated depreciation of \$17,091,410, \$345,218
23 over Staff's recommended accumulated depreciation of \$16,746,192. As a result, the
24 Company understates its rate base by \$345,218.

1 **Q. Please comment on the Company's hypothesis regarding the impact of the**
2 **Commission Order on disallowed plant and the related accumulated depreciation in**
3 **a rate proceeding.**

4 A. The Company's interpretation of the impact of the Commission Order on disallowed plant
5 items is flawed and inconsistent with sound rate making principles. The Commission
6 authorized level of revenue requirement in the last proceeding was based on a 2001 test
7 year, which required matching of customer count, rate base and operating expenses as of
8 test year end. Plant items disallowed by the Commission Order in the 2001 rate case,
9 were reflected in the calculation of the approved rate base, and thus the approved level of
10 revenue requirement in that proceeding. As a result, the Commission in its decision
11 incorporated disallowed plant in the calculation of gross utility plant in service as well as
12 the related accumulated depreciation. Although the Commission Order in the 2001
13 proceeding was dated July 2004, all rate making elements were established based on 2001
14 year end balances.

15
16 Further, the Company's assertion that because the Commission Order in the 2001
17 proceeding was dated July 2004, disallowed plant should be eliminated as of the date of
18 the decision is flawed. The date of the Commission Order did not move the test year in
19 the last proceeding from December 2001 to July 2004. For example, the approved level of
20 operating expenses, such as purchased power, did not change from 2001 levels to the
21 Company's incurred costs in 2004. As a result, the Company's authorized revenue
22 requirement in the 2001 rate case does not reflect 2004 cost of service.

23

1 **Q. Could there be an instance when the effective date of an Order becomes the effective**
2 **date of certain elements of rate making?**

3 A. Yes. For example, if the Commission approves new depreciation rates in a rate
4 proceeding, the new rates become effective as of the date of Commission Order.

5
6 **Q. What is the purpose of Staff's recommendations to remove plant items disallowed in**
7 **the last proceeding?**

8 A. Staff's adjustments correct for accounting errors in the Company's financial records.
9 When plant items are disallowed based on a test year, such plant items are deemed to be
10 disallowed as of the test year end. These adjustments correctly eliminate plant items that
11 were disallowed in the last rate case from gross utility plant in service, as of December
12 2001.

13
14 **Q. What is the impact of Staff's recommended level of accumulated depreciation on rate**
15 **base?**

16 A. Because Staff's recommended level of accumulated depreciation is less than the
17 Company's proposal, it results in a higher rate base than that proposed by the Company.
18 Therefore, Staff's recommendation is beneficial to the Company in that it results in a
19 higher level of revenue requirement.

20

1 *Gross Utility Plant in Service – Eastern Division*

2 **Q. Please comment on the Residential Utility Consumer Office’s (“RUCO”)**
3 **recommendation to disallow the allocation of the Eastern Division plant in this**
4 **proceeding.**

5 A. The Company in its response to RUCO’s data request (RUCO 2.06) stated that the
6 “...Eastern Division plant was moved from the Eastern Division business unit to strictly
7 Mohave business unit in 2007.” Therefore, Staff finds RUCO’s recommended
8 adjustments relating to the Eastern Division plant to be appropriate since the referenced
9 plant items are no longer used and useful for the provision of service to Sun City Water
10 District. However, it appears that the Sun City Water District may continue to benefit
11 from operating costs attributable to the Eastern business unit.

12
13 **Q. Has Staff proposed adjustments to eliminate the effect of the Eastern Division plant**
14 **on the Company’s rate base?**

15 A. Yes. Consistent with RUCO’s recommendation, Staff recommends removal of \$13,835
16 from the Company’s gross utility plant in service and eliminating \$3,542 of accumulated
17 depreciation. Staff’s adjustments reduce its recommended rate base by \$10,293, from
18 \$25,306,214 to \$25,295,921.

19
20 ***OPERATING INCOME***

21 *Fuel and Power Cost*

22 **Q. Has the Company accepted RUCO’s recommendation to disallow late payment fees**
23 **relating to fuel and power costs?**

24 A. Yes.
25

1 **Q. Did Staff incorporate this adjustment in its revised operating income?**

2 A. Yes. As shown in Surrebuttal Schedule AII-4, Staff has reduced fuel and power cost by
3 \$334, to reflect RUCO's adjustment for late payment fees.

4
5 *Waste Disposal Fees*

6 **Q. Has the Company accepted RUCO's recommendation regarding waste disposal
7 expense**

8 A. Yes. The Company accepted RUCO's recommendation to disallow \$4,270 of waste
9 disposal expense.

10
11 **Q. Did Staff incorporate RUCO's recommendation in its revised operating income?**

12 A. Yes. Staff reduced operating income by \$4,270 to remove waste disposal expense.

13
14 *Rate Case Expense*

15 **Q. Did Staff reflect its recalculated rate case expense in operating income?**

16 A. Yes. Staff now recommends \$23,566 of rate case expense. Please see Staff's response to
17 Mr. Broderick for detailed analysis.

18
19 *Maintenance Expense*

20 **Q. What is the Company's request regarding an increase in its level of maintenance
21 expense?**

22 A. The Company in its Rebuttal Testimony seeks recovery of \$122,498 relating to deferred
23 tank painting expense. According to Ms. Gutowski, the Company inadvertently omitted
24 its incurred cost of tank maintenance in its original proposal. The Company proposes to
25 amortize this cost over a three year period, at \$40,833.

1 **Q. Please comment on the Company's proposal to increase maintenance expense by the**
2 **costs of deferred tank painting.**

3 A. Staff recognizes that Arizona-American has the practice of accruing tank maintenance
4 expense in a deferral account for recovery in future proceedings. As a result, Staff accepts
5 the Company's belated request to recover its accrual tank maintenance in this proceeding.

6

7 **Q. Has Staff reviewed the Company's requested tank maintenance expense?**

8 A. Yes. Staff has reviewed a copy of the Company's general ledger relating to tank
9 maintenance and the related invoices on costs incurred in 2006. Staff found that the
10 Company's tank painting expense aggregated to \$121,109, with a net balance of \$109,388,
11 at test year end. Staff has determined that the difference of \$11,721 is attributable to test
12 year amortization that is already reported in its maintenance expense.

13

14 **Q. What is Staff's recommendation regarding tank maintenance expense?**

15 A. Staff recommends normalizing the Company's net balance of tank maintenance expense
16 of \$109,388 over four years, at \$27,347. Staff's recommendation is consistent with the
17 Company's proposal for filing its next rate case in 2012.

18

19 *Depreciation Expense*

20 **Q. Has Staff accepted the Company's calculated depreciation expense in this**
21 **proceeding?**

22 A. Yes.

23

1 **Q. What is the impact of Staff's adoption of the Company's calculated depreciation**
2 **expense?**

3 A. Staff's adoption of the Company's calculated depreciation expense increases Staff's
4 recommended depreciation expense by \$9,207, from \$1,252,789 to 1,262,086.

5

6 **Q. Does this conclude your Surrebuttal Testimony?**

7 A. Yes.

REVENUE REQUIREMENT

| LINE NO. | DESCRIPTION | [A] COMPANY Rebuttal COST | [B] STAFF Surrebuttal COST |
|----------|---------------------------------------|------------------------------------|-------------------------------------|
| 1 | Adjusted Rate Base | \$ 24,960,997 | \$ 25,295,921 |
| 2 | Adjusted Operating Income (Loss) | \$ 702,920 | \$ 734,820 |
| 3 | Current Rate of Return (L2 / L1) | 2.82% | 2.90% |
| 4 | Required Rate of Return | 7.69% | 7.60% |
| 5 | Required Operating Income (L1 * L4) | \$ 1,920,253 | \$ 1,922,490 |
| 6 | Operating Income Deficiency (L5 - L2) | \$ 1,217,333 | \$ 1,187,670 |
| 7 | Gross Revenue Conversion Factor | 1.6286 | 1.6369 |
| 8 | Required Revenue Increase (L7 * L6) | \$ 1,982,590 | \$ 1,944,072 |
| 9 | Adjusted Test Year Revenue | \$ 7,688,479 | \$ 7,688,479 |
| 10 | Proposed Annual Revenue (L8 + L9) | \$ 9,671,069 | \$ 9,632,551 |
| 11 | Required Increase in Revenue (%) | 25.79% | 25.29% |
| 12 | Rate of Return on Equity (%) | 11.30% | 10.80% |

References:

Columns [A]: Company Schedules A-1, Rebuttal

Columns [B]: STAFF Surebuttal Schedules All-2, All-3 and All-4

GROSS REVENUE CONVERSION FACTOR

| LINE NO. | DESCRIPTION | (A) | (B) | (C) | (D) |
|--|--|-----------------|--------------|----------------|------------|
| <u>Calculation of Gross Revenue Conversion Factor:</u> | | | | | |
| 1 | Billings | 1.000000 | | | |
| 2 | Uncollectible Factor | 0.000000 | | | |
| 3 | Revenues | 1.000000 | | | |
| 4 | Less: Combined Federal, State & Property Tax Rate (L18) | 0.389081 | | | |
| 5 | Subtotal (L3 - L4) | 0.610919 | | | |
| 6 | Revenue Conversion Factor (L1 / L5) | 1.636879 | | | |
| <u>Calculation of Effective Tax Rate:</u> | | | | | |
| 7 | Operating Income Before Taxes (Arizona Taxable Income) | 100.0000% | | | |
| 8 | Arizona State Income Tax Rate | 6.9680% | | | |
| 9 | Federal Taxable Income (L7 - L8) | 93.0320% | | | |
| 10 | Applicable Federal Income Tax Rate (Line 43) | 33.5605% | | | |
| 11 | Effective Federal Income Tax Rate (L9 x L10) | 31.2220% | | | |
| 12 | Combined Federal and State Income Tax Rate (L8 + L11) | | 38.1900% | | |
| <u>Calculation of Effective Property Tax Rate:</u> | | | | | |
| 13 | Unity | 100.0000% | | | |
| 14 | Combined Federal & State Income Tax Rate | 38.1900% | | | |
| 15 | One Minus Combined Income Tax Rate | 61.81004% | | | |
| 16 | Property Tax Factor | 1.16186% | | | |
| 17 | Effective Property Tax Rate (L15 x L16) | | 0.71815% | | |
| 18 | Combined Federal, State Income & Property Tax Rate (L12 + L17) | | | 38.9081% | |
| 19 | Required Operating Income (Schedule All-1, Line 5) | \$ 1,923,272 | | | |
| 20 | Adjusted Test Year Operating Income (Loss) (Schedule All-11, Line 27) | \$ 755,697 | | | |
| 21 | Required Increase in Operating Income (L19 - L20) | \$ 1,167,575 | \$ 1,167,575 | | |
| 22 | Income Taxes on Recommended Revenue (Col. (D), L42) | \$ 667,879 | | | |
| 23 | Income Taxes on Test Year Revenue (Col. (B), L42) | \$ (65,935) | | | |
| 24 | Required Increase in Revenue to Provide for Income Taxes (L22 - L23) | | \$ 733,814 | | |
| 25 | Property Tax with Recommended Revenue (All-15, Col B, L19) | \$ 287,416 | | | |
| 26 | Property Tax on Test Year Revenue (All-15, Col A, L16) | \$ 265,180 | | | |
| 27 | Increase in Property Tax Due to Increase in Revenue (L25-L26) | | \$ 22,235 | | |
| 28 | Required Increase in Revenue (L21 + L24 + L27) | | | \$ 1,923,624 | |
| <u>Calculation of Income Tax:</u> | | | | | |
| | | Test Year | | Staff Proposed | |
| 29 | Revenue (Schedule All-11, Columns C and E) | \$ 7,688,479 | | \$ 9,632,551 | |
| 30 | Less: Operating Expenses Excluding Income Taxes | \$ 7,019,594 | | \$ 7,042,182 | |
| 31 | Less: Synchronized Interest (L46) | \$ 860,061 | | \$ 860,061 | |
| 32 | Arizona Taxable Income (L29 - L30 - L31) | \$ (191,176) | | \$ 1,730,308 | |
| 33 | Arizona State Income Tax Rate | 6.968% | | 6.968% | |
| 34 | Arizona Income Tax (L32 x L33) | | \$ (13,321) | | \$ 120,568 |
| 35 | Federal Taxable Income (L32 - L34) | \$ (177,855) | | \$ 1,609,740 | |
| 36 | Federal Tax on First Income Bracket (\$1 - \$50,000) @ 15% | \$ (7,500) | | \$ 7,500 | |
| 37 | Federal Tax on Second Income Bracket (\$51,001 - \$75,000) @ 25% | \$ (6,250) | | \$ 6,250 | |
| 38 | Federal Tax on Third Income Bracket (\$75,001 - \$100,000) @ 34% | \$ (8,500) | | \$ 8,500 | |
| 39 | Federal Tax on Fourth Income Bracket (\$100,001 - \$335,000) @ 39% | \$ (30,364) | | \$ 91,650 | |
| 40 | Federal Tax on Fifth Income Bracket (\$335,001 - \$10,000,000) @ 34% | \$ - | | \$ 433,412 | |
| 41 | Total Federal Income Tax | | \$ (52,614) | | \$ 547,312 |
| 42 | Combined Federal and State Income Tax (L34 + L41) | | \$ (65,935) | | \$ 667,879 |
| 43 | Applicable Federal Income Tax Rate [Col. (D), L35 - Col. (B), L35] / [Col. (C), L41 - Col. (A), L41] | | | | 33.5605% |
| <u>Calculation of Interest Synchronization:</u> | | | | | |
| 44 | Rate Base (Schedule All-3, Col. (C), Line 14) | \$ 25,295,921 | | | |
| 45 | Weighted Average Cost of Debt | 3.40% | | | |
| 46 | Synchronized Interest (L44 x L45) | \$ 860,061 | | | |

ARIZONA AMERICAN WATER COMPANY - SUN CITY WATER DISTRICT

Surrebuttal Schedule All-3

Docket No. W-01303A-07-209

Test Year Ended December 31, 2006

RATE BASE - ORIGINAL COST

| LINE NO. | DESCRIPTION | (A) STAFF DIRECT | (B) SURREBUTTAL ADJUSTMENTS | (C) STAFF SURREBUTTAL |
|--------------|--|----------------------|--------------------------------|--------------------------|
| 1 | Plant in Service | \$ 43,923,255 | \$ (13,835) | \$ 43,909,420 |
| 2 | Less: Accumulated Depreciation | 16,746,192 | (3,542) | 16,742,650 |
| 3 | Net Plant in Service | <u>\$ 27,177,063</u> | <u>\$ (10,293)</u> | <u>\$ 27,166,770</u> |
| <u>LESS:</u> | | | | |
| 4 | Net Contribution in Aid of Constructiuron (CIAC) | \$ 63,004 | - | \$ 63,004 |
| 5 | Imputed Regulatory Contributions | 567,874 | - | 567,874 |
| 6 | Advances in Aid of Construction (AIAC) | 3,576,920 | - | 3,576,920 |
| 7 | Imputed Regulatory Advances | 551,760 | - | 551,760 |
| 8 | Customer Deposits | 2,100 | - | 2,100 |
| 9 | Investment Tax Credits | (1,938,781) | - | (1,938,781) |
| 10 | Total Deductions | <u>\$ 2,822,877</u> | <u>-</u> | <u>\$ 2,822,877</u> |
| <u>ADD:</u> | | | | |
| 11 | Allowance for Working Capital | 309,400 | - | 309,400 |
| 12 | Deferred Debits | 642,628 | - | 642,628 |
| 13 | Total Additions | <u>\$ 952,028</u> | <u>-</u> | <u>\$ 952,028</u> |
| 14 | Original Cost Rate Base | <u>\$ 25,306,214</u> | <u>\$ (10,293)</u> | <u>\$ 25,295,921</u> |

References:

Column [A], Staff Direct Schedule All-1

Column [B]: Column [C] - Column [A]

OPERATING INCOME STATEMENT - TEST YEAR AND STAFF RECOMMENDED

| LINE NO. | DESCRIPTION | TEST YEAR | | | RECOMMENDED | |
|----------------------------|---------------------------------|---------------------|--------------------|-----------------------|---------------------|--------------------------------------|
| | | [A] STAFF DIRECT | [B] ADJUSTMENTS | [C] STAFF ADJUSTED | [D] ADJUSTMENTS | [E] STAFF SURREBUTTAL RECOMMENDED |
| <u>REVENUES:</u> | | | | | | |
| 1 | Metered Water Sales | \$ 7,578,436 | - | \$ 7,578,436 | 1,944,072 | \$ 9,522,508 |
| 2 | Other Operating Revenue | 110,043 | - | 110,043 | | 110,043 |
| 3 | Total Operating Revenues | \$ 7,688,479 | - | \$ 7,688,479 | \$ 1,944,072 | \$ 9,632,551 |
| <u>OPERATING EXPENSES:</u> | | | | | | |
| 6 | Labor | \$ 1,137,093 | - | \$ 1,137,093 | | \$ 1,137,093 |
| 7 | Purchased Water | - | - | \$ - | | \$ - |
| 8 | Fuel and Power | 1,573,296 | (334) | \$ 1,572,962 | | \$ 1,572,962 |
| 9 | Chemicals | 49,041 | - | \$ 49,041 | | \$ 49,041 |
| 10 | Waste Disposal | 4,270 | (4,270) | \$ - | | \$ - |
| 11 | Management Fees | 1,386,158 | - | \$ 1,386,158 | | \$ 1,386,158 |
| 12 | Group Insurance | 276,821 | - | \$ 276,821 | | \$ 276,821 |
| 13 | Pensions | 51,046 | - | \$ 51,046 | | \$ 51,046 |
| 14 | Regulatory Expense | 24,492 | (926) | \$ 23,566 | | \$ 23,566 |
| 15 | Insurance Other Than Group | 51,587 | - | \$ 51,587 | | \$ 51,587 |
| 16 | Customer Accounting | 165,878 | - | \$ 165,878 | | \$ 165,878 |
| 17 | Rents | 19,442 | - | \$ 19,442 | | \$ 19,442 |
| 18 | General Office Expense | 97,290 | - | \$ 97,290 | | \$ 97,290 |
| 19 | Miscellaneous | 360,734 | - | \$ 360,734 | | \$ 360,734 |
| 20 | Maintenance Expense | 173,137 | 27,347 | \$ 200,484 | | \$ 200,484 |
| 21 | Depreciation & Amortization | 1,252,879 | 9,207 | \$ 1,262,086 | | \$ 1,262,086 |
| 22 | Amortization of CIAC | - | - | \$ - | | \$ - |
| 23 | General Taxes | 100,225 | - | \$ 100,225 | | \$ 100,225 |
| 24 | Property Taxes | 265,180 | - | \$ 265,180 | \$ 22,588 | \$ 287,768 |
| 25 | Income Taxes | (52,668) | (13,267) | (65,935) | 733,814 | 667,879 |
| 26 | Total Operating Expenses | \$ 6,935,902 | \$ 17,758 | \$ 6,953,659 | \$ 756,402 | \$ 7,710,061 |
| 27 | Operating Income (Loss) | \$ 752,577 | \$ (17,758) | \$ 734,820 | \$ 1,187,670 | \$ 1,922,490 |

References:

- Column (A): Staff Direct Schedule All-11
- Column (B): Company Schedule C-2 Rebuttal, Page 1
- Column (C): Column (A) + Column (B)
- Column (E): Column (C) + Column (D)

OPERATING INCOME ADJUSTMENT - PROPERTY TAX EXPENSE

| LINE NO. | DESCRIPTION | [A] STAFF AS ADJUSTED | [B] STAFF RECOMMENDED |
|----------|---|-----------------------------|-----------------------------|
| 1 | Staff Adjusted Test Year Revenues - 2005 | \$ 7,688,479 | \$ 7,688,479 |
| 2 | Weight Factor | 2 | 2 |
| 3 | Subtotal (Line 1 * Line 2) | \$ 15,376,958 | \$ 15,376,958 |
| 4 | Staff Recommended Revenue | 7,688,479 | 9,632,551 |
| 5 | Subtotal (Line 4 + Line 5) | \$ 23,065,437 | \$ 25,009,509 |
| 6 | Number of Years | 3 | 3 |
| 7 | Three Year Average (Line 5 / Line 6) | \$ 7,688,479 | \$ 8,336,503 |
| 8 | Department of Revenue Multiplier | 2 | 2 |
| 9 | Revenue Base Value (Line 7 * Line 8) | \$ 15,376,958 | \$ 16,673,006 |
| 10 | Plus: 10% of CWIP | 20,865 | 20,865 |
| 11 | Less: Net Book Value of Licensed Vehicles | 181,994 | 181,994 |
| 12 | Full Cash Value (Line 9 + Line 10 - Line 11) | \$ 15,215,829 | \$ 16,511,877 |
| 13 | Assessment Ratio | 23.50% | 23.50% |
| 14 | Assessment Value (Line 12 * Line 13) | \$ 3,575,720 | \$ 3,880,291 |
| 15 | Composite Property Tax Rate - Obtained from ADOR | 7.41614% | 7.41614% |
| 16 | Staff Test Year Adjusted Property Tax Expense (Line 14 * Line 15) | \$ 265,180 | |
| 17 | Company Proposed Property Tax | 297,758 | |
| 18 | Staff Test Year Adjustment (Line 16 - Line 17) | \$ (32,578) | |
| 19 | Property Tax - Staff Recommended Revenue (Line 14 * Line 15) | | \$ 287,768 |
| 20 | Staff Test Year Adjusted Property Tax Expense (Line 16) | | 265,180 |
| 21 | Increase in Property Tax Due to Increase in Revenue Requirement | | \$ 22,587 |
| 22 | Increase in Property Tax Due to Increase in Revenue Requirement (Line 21) | | \$ 22,587 |
| 23 | Increase in Revenue Requirement | | \$ 1,944,072 |
| 24 | Increase in Property Tax Per Dollar Increase in Revenue (Line 22 / Line 23) | | 1.161862% |

REFERENCES:

- Line 15: Composite Tax Rate obtained from Arizona Department of Revenue
- Line 17: Company Schedule C-1
- Line 21: Line 19 - Line 20
- Line 23: Schedule All-1

ARIZONA AMERICAN WATER COMPANY - SUN CITY WATER DISTRICT

Surrebuttal Schedule All-6

Docket No. W-01303A-07-209
 Test Year Ended December 31, 2006

OPERATING INCOME ADJUSTMENT - REGULATORY EXPENSE

| LINE NO. | DESCRIPTION | [A] COMPANY AS FILED | [B] STAFF ADJUSTMENTS | [C] STAFF AS ADJUSTED |
|----------|---|----------------------------|-----------------------------|-----------------------------|
| 1 | Regulatory Expense | \$ 50,000 | \$ (26,434) | \$ 23,566 |
| 2 | Total | \$ 50,000 | \$ (26,434) | \$ 23,566 |
| 3 | | | | |
| 4 | Re-calculation of Regulatory Expense | | | |
| 5 | | | Actual | Estimated |
| 6 | | | through | Future |
| 7 | Rate Case Expense: | | 9/24/2007 | Expense |
| 8 | Craig Marks, External Counsel | | Estimated | Total |
| 9 | | | Hours | |
| 10 | | | Hourly | |
| 11 | | | Rate | |
| 12 | Dollar Energy Fund | | | \$0 |
| 13 | Low Income Program Testimony, External Witness | | | \$11,650 |
| 14 | | | | \$0 |
| 15 | Copying Services, Public Meetings, Notices, Surveys | | | \$0 |
| 16 | Fedex Kinko's | | | \$3,392 |
| 17 | Arizona Republic Classified | | | \$33 |
| 18 | Mesa Tribune | | | \$170 |
| 19 | Office Max | | | \$1,367 |
| 20 | Moody's Quick Delivery | | | \$50 |
| 21 | Direct Impact (Postage, Copying Notice) | | | \$8,299 |
| 22 | Additional Fire Flow & Ratemaking Survey | | | \$17,500 |
| 23 | Public Participation Meetings | | | \$2,000 |
| 24 | Miscellaneous Other | | | \$465 |
| 25 | | | | \$72,315 |
| 26 | | | | \$94,266 |
| 27 | Normalized over 4 years (\$94,266) | | | \$23,566 |

BEFORE THE ARIZONA CORPORATION COMMISSION

MIKE GLEASON
Chairman
WILLIAM A. MUNDELL
Commissioner
JEFF HATCH-MILLER
Commissioner
KRISTIN K. MAYES
Commissioner
GARY PIERCE
Commissioner

IN THE MATTER OF THE APPLICATION OF) DOCKET NO. WS-01303A-07-0209
ARIZONA-AMERICAN WATER COMPANY, INC.,)
AN ARIZONA CORPORATION, FOR A)
DETERMINATION OF THE CURRENT FAIR VALUE)
OF ITS UTILITY PLANT AND PROPERTY AND FOR)
INCREASES IN ITS RATES AND CHARGES BASED)
THEREON FOR UTILITY SERVICE BY ITS SUN)
CITY WATER DISTRICT)

SURREBUTTAL TESTIMONY

OF

DOROTHY HAINS

UTILITIES ENGINEER

UTILITIES DIVISION

DECEMBER 14, 2007

EXECUTIVE SUMMARY
ARIZONA-AMERICAN WATER COMPANY – SUN CITY WATER DISTRICT
DOCKET NO. W-01303A-07-0209

Two issues will be addressed in Staff witness, Dorothy Hains' Surrebuttal Testimony:

1. Fire Hydrant Replacement Cost In Developed Areas
Since the fire hydrants that are to be replaced are located within the same construction areas as the lines, the restoration costs included for line replacement and repair should be adequate to cover fire hydrant installation as well. Staff still recommends its downward cost adjustment for fire hydrant installation of 0.41 million dollars. However, Staff has not made a determination of the capital improvements as "used and useful" at this time, but defers this determination until the Company files its next rate application.

2. Non-account Water
The water loss in the Company's Sun City System is at 10 percent which is acceptable. Staff does not recommend any specific reporting at this time. If the water loss at any time before the next rate case is greater than 10 percent, the Company shall come up with a plan to reduce water loss to less than 10 percent, or prepare a report containing a detailed analysis and explanation demonstrating why a water loss reduction to 10 percent or less is not feasible or cost effective. Staff has no objection to the Company suggested water usage form. Staff agrees with the Company that it use its annual report to track water loss, as long as water usage data is reported on an individual system basis in the Company's annual report.

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| FIRE HYDRANT REPLACEMENT COST IN DEVELOPED AREAS | 1 |
| NON-ACCOUNT WATER..... | 2 |

1 **INTRODUCTION**

2 **Q. Please state your name and business address.**

3 A. My name is Dorothy Hains. My business address is 1200 West Washington Street,
4 Phoenix, Arizona 85007.

5
6 **Q. Are you the same Dorothy Hains who has previously filed testimony in this Arizona-
7 American Water Company ("Company") Sun City Water rate proceeding?**

8 A. Yes.

9
10 **FIRE HYDRANT REPLACEMENT COST IN DEVELOPED AREAS**

11 **Q. The Company argues that Staff's estimated fire hydrant cost is too low because
12 construction will take place in developed areas and the Company will incur
13 additional expenses for restoration. After reading the Company's Rebuttal
14 Testimony, does Staff change its position? Please explain.**

15 A. No. Staff agrees that additional costs will be incurred for restoration when construction
16 takes place in areas that are already developed. In this case, however, the additional cost
17 of restoration has been accounted for and is already included in the line replacement and
18 repair cost estimates. Since the fire hydrants that are to be replaced are located within the
19 same construction areas as the lines, the restoration costs included for line replacement
20 and repair should be adequate to cover fire hydrant installation as well. Staff believes that
21 the restoration cost would be overstated if these costs are also included in the cost estimate
22 for fire hydrant installation. Therefore, Staff still recommends its downward cost
23 adjustment for fire hydrant installation of 0.41 million dollars. However, Staff has not
24 made a determination of the capital improvements as "used and useful" at this time, but
25 defers this determination until the Company files its next rate application.

1 **NON-ACCOUNT WATER**

2 **Q. Did Staff recommend that the Company docket its water loss report in a scheduled**
3 **filing in the Staff recommendation? Please explain.**

4 A. No. The water loss in the Company's Sun City System is at 10 percent which is
5 acceptable. Therefore, Staff does not recommend any specific reporting at this time.
6 However, because the water loss should be at 10 percent or less, the Company should
7 monitor the water system closely and take action to ensure the water loss remains at 10
8 percent or less in the future. If the water loss at any time before the next rate case is
9 greater than 10 percent, the Company should come up with a plan to reduce water loss to
10 less than 10 percent, or prepare a report containing a detailed analysis and explanation
11 demonstrating why a water loss reduction to 10 percent or less is not feasible or cost
12 effective.

13
14 **Q. Does Staff find the form that the Company proposes to use to report water usage**
15 **data for the Sun City System acceptable?**

16 A. Yes. Staff has no objection to the Company suggested form.

17
18 **Q. Does Staff agree that the Company should use its annual report to track water loss?**

19 A. Yes. As long as water usage data is reported on an individual system basis in the
20 Company's annual report.

21
22 **Q. Does this conclude your Surrebuttal Testimony?**

23 A. Yes, it does.

BEFORE THE ARIZONA CORPORATION COMMISSION

MIKE GLEASON
Chairman
WILLIAM A. MUNDELL
Commissioner
JEFF HATCH-MILLER
Commissioner
KRISTIN K. MAYES
Commissioner
GARY PIERCE
Commissioner

IN THE MATTER OF THE APPLICATION OF) DOCKET NO. W-01303A-07-0209
ARIZONA AMERICAN WATER COMPANY)
FOR A DETERMINATION OF THE CURRENT)
FAIR VALUE OF ITS UTILITY PLANT AND)
PROPERTY AND FOR INCREASES IN ITS)
RATES AND CHARGES BASED THEREON)
FOR UTILITY SERVICE BY ITS SUN CITY)
WATER DISTRICT)

SURREBUTTAL
TESTIMONY
OF
STEVEN P. IRVINE
PUBLIC UTILITIES ANALYST IV
UTILITIES DIVISION
ARIZONA CORPORATION COMMISSION

DECEMBER 14, 2007

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**EXECUTIVE SUMMARY
ARIZONA-AMERICAN WATER COMPANY
DOCKET NO. W-01303A-07-0209**

The Surrebuttal Testimony of Staff witness Steven P. Irvine addresses the following issues:

Capital Structure – Staff recommends that the Arizona Corporation Commission (“Commission”) adopt a capital structure for Arizona-American Water Company (“Arizona American” or “Company”) for this proceeding consisting of 61.0 percent debt and 39.0 percent equity.

Cost of Equity – Staff’s 10.8 percent estimated return on equity (“ROE”) for the Company is based on cost of equity estimates for the sample companies ranging from 9.1 percent using the discounted cash flow method (“DCF”) to 10.5 percent using the capital asset pricing model (“CAPM”). Staff’s ROE recommendation includes a 1.0 percent upward adjustment due to the higher financial risk reflected in Arizona American’s capital structure in relation to that of the sample companies.

Cost of Debt – Staff recommends that the Commission adopt a 5.5 percent cost of debt.

Overall Rate of Return – Staff recommends that the Commission adopt an overall rate of return (“ROR”) of 7.6 percent.

Mr. Broderick’s Testimony – The Commission should reject the 7.7 percent Cost of Capital proposed by Arizona American as it is appropriate to include short-term debt in the capital structure. The Company’s position that there is a lack of association between short-term debt and rate base is inconsistent with modern financial theory. Each of the elements of the capital structure (capital leases, long-term debt, short-term debt, preferred stock, and common stock) together provide a single pool or source of funds that are available for all uses of funds.

1 **I. INTRODUCTION**

2 **Q. Please state your name, occupation, and business address.**

3 A. My name is Steve Irvine. I am a Public Utilities Analyst IV employed by the Arizona
4 Corporation Commission ("ACC" or "Commission") in the Utilities Division ("Staff").
5 My business address is 1200 West Washington Street, Phoenix, Arizona 85007.

6
7 **Q. Did you previously file Direct Testimony pertaining to cost of capital in this case?**

8 A. Yes.

9
10 **Q. What matters are addressed in your Surrebuttal Testimony?**

11 A. This Surrebuttal Testimony presents an update of Staff's cost of capital analysis and
12 related recommendations for Arizona-American Water Company ("Arizona American" or
13 "Company") and responds to cost of capital elements of the rebuttal testimony of Arizona
14 American Witness Mr. Thomas M. Broderick.

15
16 **Q. Please explain how Staff's cost of capital Surrebuttal Testimony is organized.**

17 A. Staff's Surrebuttal Testimony is presented in four sections. Section I is this introduction.
18 Section II discusses Staff's updated cost of capital analysis. Section III presents Staff's
19 comments on the cost of capital elements of the Rebuttal Testimony of the Company's
20 cost of capital witness, Mr. Thomas M. Broderick. Lastly, Section IV presents Staff's cost
21 of capital recommendations.

22

1 **II. UPDATED COST OF CAPITAL ANALYSIS**

2 **Q. Has Staff updated its cost of capital (“COC”) analysis since filing Direct Testimony?**

3 A. Yes. Staff has updated the analysis to reflect more current market data. Surrebuttal
4 schedules SPI-1 through SPI-11 are included to support the new results and analysis.

5
6 **Q. Has Staff updated the capital structure?**

7 A. Yes. Staff now recommends an updated capital structure composed of 69.0 percent debt
8 and 31.0 percent equity. Staff’s updated capital structure includes an increase to the rate
9 of the \$10,000,000 Long-Term promissory note due October 2037 from 5.95 percent to
10 6.5 percent. This change is made to update the previously estimated cost of the note and
11 reflect the maximum authorized rate for the note as the Company reports that the actual
12 cost of the note exceeds the maximum Commission authorized rate¹. The difference
13 between the actual debt rate of 6.593 percent for this note and the maximum Commission
14 authorized rate of 6.5 percent has no material affect on the financial soundness of the
15 Company and Staff’s rate recommendation in this proceeding.

16
17 **Q. Has Staff changed its method of calculating rate of return (“ROR”)?**

18 A. No. The methodology has not been changed.

19
20 **Q. What is Staff’s updated return on equity (“ROE”)?**

21 A. Staff continues to recommend a 10.8 percent ROE. While many of the inputs to Staff’s
22 models have changed, the resulting ROE estimation has not.

23

¹ Thomas M. Broderick’s rebuttal testimony. Page 5.

1 **Q. What is Staff's updated ROR estimate?**

2 A. Staff continues to recommend a 7.6 percent overall ROR for Arizona American. While
3 many of the inputs to Staff's models have changed, the resulting ROR estimation has not.
4 Staff's recommendation is based on an ROE of 10.8 percent and a cost of debt of 5.5
5 percent.

6
7 **III. RESPONSE TO THE REBUTTAL TESTIMONY OF THE APPLICANT'S COST**
8 **OF CAPITAL WITNESS MR. THOMAS M. BRODERICK**

9 **Q. Briefly summarize Arizona American's proposed capital structure, return on equity**
10 **and overall rate of return for this proceeding.**

11 A. The Company proposes a capital structure that consists of 41.4 percent equity and 58.6
12 percent debt. The Company's recommended cost of equity is 10.8 percent and its
13 recommended cost of debt is 5.5 percent. The Company's proposed ROR is 7.7 percent.
14 Staff and the Company agree on both cost of equity and cost of debt. Staff and the
15 Company disagree on the amount of debt and equity in the capital structure resulting in a
16 difference of 10 basis points in the respective ROR recommendations.

17
18 **Q. What is Staff's response to the Company's assertion that because short-term debt**
19 **does not finance rate base it is inappropriate to include short-term debt in the capital**
20 **structure?²**

21 A. This statement appears to be based on a mistaken understanding of the role of the capital
22 structure in estimation of cost of capital. The cost of capital to a company issuing a
23 variety of securities is an average of the expected returns on the securities the company
24 has issued weighted according to the size of each security relative to the company's entire
25 security portfolio. The size of each security relative to the company's entire security

² Ibid Page 4.

1 portfolio is quantified in the company's capital structure. The capital structure, therefore,
2 describes the relative proportions of each type of security (capital leases, long-term debt,
3 short-term debt, preferred stock, and common stock). This entire security portfolio
4 includes all of the elements included in the capital structure. According to modern
5 financial theory these elements provide a single pool or source of funds that are available
6 for all uses of funds. Therefore, short-term debt, as an element of the source of funds, is
7 used to fund rate base, a use of funds. The Company's position that there is a lack of
8 association between short-term debt and rate base is inconsistent with this construct of
9 modern financial theory.

10
11 **Q. What other information supports including short-term debt in a capital structure?**

12 A. Arizona Administrative Code R14-2-103, Schedule D-2 which describes rate case
13 application filing requirements includes short-term debt as a component of the cost of
14 capital. In addition to this example, Commission Decision No. 68310, dated November
15 14, 2005, ordered the Company to file an equity plan to achieve and maintain an equity
16 ratio between 40 and 60 percent of total capital. The order clearly included short-term in
17 the capital structure, as shown below:

18 "IT IS FURTHER ORDERED that Arizona-American Water Company
19 shall file a plan with Docket Control by December 31, 2005 that describes
20 how the Company expects to attain and maintain a capital structure
21 (equity, long-term debt, and *short-term debt*) with equity representing
22 between 40 and 60 percent of total capital."³ (*Emphasis added*)

23

³ Decision No. 68310, November 2005. Page 15.

1 **Q. What is Staff's response to the Company's characterization of inclusion of short-**
2 **term debt in the capital structure as an additional way to depress Arizona-**
3 **American's equity ratio?⁴**

4 A. As the Company notes, inclusion of short-term debt in the capital structure does result in a
5 smaller equity ratio than the equity ratio that would exist should short-term debt be
6 excluded. However, inclusion of short-term debt is appropriate for the reasons discussed
7 previously. Exclusion of short-term debt from the capital structure would be inappropriate
8 as it would create a false representation of the Company's cost of capital for having
9 removed a component of the capital costs. This would also have the result of inflating the
10 Company's cost of capital above its appropriate level as equity would be more prominent
11 in the capital structure.

12
13 **Q. Do the previous Commission Decisions cited by the Company to support its request**
14 **for exclusion of short-term debt in this rate case provide a good reason for applying**
15 **that practice in this case?⁵**

16 A. No. Commission Decision No. 68310 of November 2005 dealt with arsenic cost recovery
17 mechanisms and did not establish a cost of capital finding. Furthermore, the Commission
18 is not bound by previous decisions or practices. This is expressed in Decision No. 69440
19 (May 2007). It states "We wish to make it clear that, in adopting Arizona-American's
20 hypothetical capital structure in this case, we offer no assurance that a similar capital
21 structure will be employed in future cases."⁶ Staff has included short-term debt in the
22 capital structure for the reasons cited previously. Staff encourages the Commission to
23 follow sound financial practices in its decisions.

24

⁴ Ibid. Page 4.

⁵ Ibid. Pages 4 and 5.

⁶ Decision No. 69440. Page 14.

1 **IV. STAFF RECOMMENDATIONS**

2 **Q. What are Staff's recommendations for Arizona American's cost of capital?**

3 A. Staff makes the following recommendations for Arizona American's cost of capital:

- 4 1. Staff recommends a capital structure of 61.0 percent debt and 39.0 percent equity.
- 5 2. Staff recommends a cost of debt of 5.5 percent.
- 6 3. Staff recommends a cost of equity of 10.8 percent, which includes a 100 basis point
- 7 financial risk adjustment.
- 8 4. Staff recommends an overall rate of return of 7.6 percent.

9
10 **Q. Does this conclude your Surrebuttal Testimony?**

11 A. Yes, it does.

Sun City Water District
Capital Structure
And Weighted Average Cost of Capital
Staff Recommended and Company Proposed

| [A] | [B] | [C] | [D] |
|--|-------------------|--------------------|----------------------|
| <u>Description</u> | <u>Weight (%)</u> | <u>Cost</u> | <u>Weighted Cost</u> |
| Staff Recommended Structure (excludes Tolleson Obligation) | | | |
| Debt | 61.0% | 5.5% ¹ | 3.4% |
| Common Equity | 39.0% | 10.8% ² | <u>4.2%</u> |
| Weighted Average Cost of Capital/ROR | | | 7.6% |
| Company Proposed Structure | | | |
| Debt | 58.6% | 5.5% | 3.2% |
| Common Equity | 41.4% | 10.8% | <u>4.5%</u> |
| Weighted Average Cost of Capital/ROR | | | 7.7% |

[D] : [B] x [C]
 Supporting Schedule: SPI-3

1: Note that the Tolleson Obligation is excluded for the calculation of the cost of debt, resulting in a cost of debt 10 basis points higher than as shown in Schedule SPI-9.
 2: Note that the cost of equity depicts the 10.8 percent ROE inclusive of 100 basis points for financial risk as shown in Schedules SPI-9 and SPI-2. If the Commission were to determine that the financial risk adjustment should not include the Tolleson Obligation, the financial risk adjustment would be 90 basis points, resulting in a cost of equity and a rate of return of 10.7 and 7.6 percent, respectively. If the Commission decides to include the Tolleson Obligation in the capital structure, then the cost of equity and rate of return would be 10.8 and 7.5 percent, respectively (As indicated in SPI-9).

Sun City Water District
Final Cost of Equity Estimates
Sample Water Utilities

| [A] | [B] | [C] | [D] | [E] |
|---|-------|---------------------|---------------------------|----------------|
| DCF Method | | | | k |
| Constant Growth DCF Estimate | | $\frac{D_1/P_0}{1}$ | + g^2 | = 8.7% |
| Multi-Stage DCF Estimate | | 2.8% | + 5.9% | = 9.5% |
| Average of DCF Estimates | | | | 9.1% |
| CAPM Method | | | | k |
| Historical Market Risk Premium ³ | R_f | + | x $\frac{(R_p)}{1}$ | = 10.3% |
| Current Market Risk Premium ⁴ | 3.8% | + | x 7.6% ⁶ | = 10.6% |
| Average of CAPM Estimates | 4.4% | + | x 7.1% ⁷ | = 10.5% |
| | | | Average | 9.8% |
| | | | Financial risk adjustment | 1.0% |
| | | | Total | 10.8% |

1 MSN Money and Value Line

2 SPI-7

3 Risk-free rate (Rf) for 5, 7, and 10 year Treasury rates from the U.S. Treasury Department at www.ustreas.gov

4 Risk-free rate (Rf) for 30 Year Treasury bond rate from the U.S. Treasury Department at www.ustreas.gov

5 Value Line

6 Historical Market Risk Premium (Rp) from Morningstar's S&P 500 2007 Yearbook (formerly published by Ibbotson Associates).

7 Testimony

Sun City Water District
Average Capital Structure of Sample Water Utilities

| [A] | [B] | [C] | [D] |
|--------------------------------|--------------|---------------|---------------|
| Company | Debt | Common Equity | Total |
| American States Water | 50.9% | 49.13% | 100.0% |
| California Water | 43.2% | 56.8% | 100.0% |
| Aqua America | 52.8% | 47.2% | 100.0% |
| Connecticut Water | 45.8% | 54.2% | 100.0% |
| Middlesex Water | 53.9% | 46.1% | 100.0% |
| SJW Corp | <u>47.6%</u> | <u>52.4%</u> | <u>100.0%</u> |
| Average Sample Water Utilities | 49.0% | 51.0% | 100.0% |
| Arizona-American Water Company | 61.0% | 39.0% | 100.0% |

Source:
Sample Water Companies from Value Line

Sun City Water District
Growth in Earnings and Dividends
Sample Water Utilities

| [A] | [B] | [C] | [D] | [E] |
|--------------------------------|--|---|---|--|
| <u>Company</u> | Dividends Per Share 1996 to 2006 <u>DPS¹</u> | Dividends Per Share Projected <u>DPS¹</u> | Earnings Per Share 1996 to 2006 <u>EPS¹</u> | Earnings Per Share Projected <u>EPS¹</u> |
| American States Water | 1.0% | 4.2% | 1.6% | 10.1% |
| California Water | 1.0% | 0.9% | -1.2% | 9.9% |
| Aqua America | 6.7% | 9.7% | 8.8% | 8.4% |
| Connecticut Water | 1.2% | No Projection | -1.8% | No Projection |
| Middlesex Water | 2.1% | No Projection | 3.2% | No Projection |
| SJW Corp | <u>4.4%</u> | <u>No Projection</u> | <u>2.2%</u> | <u>No Projection</u> |
| Average Sample Water Utilities | 2.8% | 4.9% | 4.0% ² | 9.5% |

¹ Value Line

² Note that the figures -1.2% and -1.8% have been excluded from the calculation.

This has been done as negative growth is inconsistent with the DCF model.

Sun City Water District
Sustainable Growth
Sample Water Utilities

| [A] | [B] | [C] | [D] | [E] | [F] |
|--------------------------------|--|---|---|---|--|
| | Retention Growth 1997 to 2006 <u>br</u> | Retention Growth Projected <u>br</u> | Stock Financing Growth <u>vs</u> | Sustainable Growth 1997 to 2006 <u>br + vs</u> | Sustainable Growth Projected <u>br + vs</u> |
| <u>Company</u> | | | | | |
| American States Water | 2.6% | 5.7% | 1.6% | 4.2% | 7.3% |
| California Water | 2.3% | 4.5% | 4.4% | 6.7% | 8.9% |
| Aqua America | 4.5% | 3.9% | 5.4% | 9.9% | 9.3% |
| Connecticut Water | 2.8% | No Projection | 0.7% | 3.4% | No Projection |
| Middlesex Water | 1.2% | No Projection | 4.0% | 5.2% | No Projection |
| SJW Corp | <u>4.7%</u> | <u>No Projection</u> | <u>0.0%</u> | <u>4.7%</u> | <u>No Projection</u> |
| Average Sample Water Utilities | 3.0% | 4.7% | 2.7% | 5.7% | 8.5% |

[B]: Value Line
[C]: Value Line
[D]: Value Line and MSN Money
[E]: [B]+[D]
[F]: [C]+[D]

Sun City Water District
 Selected Financial Data of Sample Water Utilities

| [A] | [B] | [C] | [D] | [E] | [F] | [G] |
|-----------------------|--------|--------------------------|------------|----------------|----------------------------|------------------------------|
| Company | Symbol | Spot Price 11/28/2007 | Book Value | Mkt To Book | Value Line Beta β | Raw Beta β_{raw} |
| American States Water | AWR | 43.77 | 17.00 | 2.6 | 0.90 | 0.82 |
| California Water | CWT | 40.37 | 18.43 | 2.2 | 0.95 | 0.90 |
| Aqua America | WTR | 22.05 | 7.27 | 3.0 | 0.85 | 0.75 |
| Connecticut Water | CTWS | 24.99 | 12.27 | 2.0 | 0.85 | 0.75 |
| Middlesex Water | MSEX | 18.8 | 9.73 | 1.9 | 0.80 | 0.67 |
| SJW Corp | SJW | 34.61 | 12.42 | 2.8 | 0.85 | 0.75 |
| Average | | | | 2.4 | 0.87 | 0.77 |

[C]: Msn Money

[D]: Value Line

[E]: [C] / [D]

[F]: Value Line

[G]: -0.35 + [F] / 0.67

Sun City Water District
 Calculation of Expected Infinite Annual Growth in Dividends
 Sample Water Utilities

| [A] | [B] |
|---|-------------|
| <u>Description</u> | <u>g</u> |
| DPS Growth - Historical ¹ | 2.8% |
| DPS Growth - Projected ¹ | 4.9% |
| EPS Growth - Historical ¹ | 4.0% |
| EPS Growth - Projected ¹ | 9.5% |
| Sustainable Growth - Historical ² | 5.7% |
| <u>Sustainable Growth - Projected²</u> | <u>8.5%</u> |
| Average | 5.9% |

¹ Schedule SPI-4

² Schedule SPI-5

Sun City Water District
Multi-Stage DCF Estimates
Sample Water Utilities

| [A] Company | [B] Current Mkt. Price (P ₀) ¹ 1/28/2007 | [C] Projected Dividends ² (Stage 1 growth) (D _t) | | | | [E] d ₃ | [F] d ₄ | [H] Stage 2 growth ³ (g _n) | [I] Equity Cost Estimate (K) ⁴ |
|-----------------------|---|---|----------------|----------------|----------------|--------------------|--------------------|---|---|
| | | d ₁ | d ₂ | d ₃ | d ₄ | | | | |
| American States Water | 43.8 | 1.00 | 1.06 | 1.12 | 1.19 | | 6.8% | 9.0% | |
| California Water | 40.4 | 1.21 | 1.28 | 1.36 | 1.44 | | 6.8% | 9.7% | |
| Aqua America | 22.1 | 0.56 | 0.59 | 0.63 | 0.66 | | 6.8% | 9.2% | |
| Connecticut Water | 25.0 | 0.88 | 0.93 | 0.99 | 1.05 | | 6.8% | 10.2% | |
| Middlesex Water | 18.8 | 0.70 | 0.74 | 0.79 | 0.83 | | 6.8% | 10.4% | |
| SJW Corp | 34.6 | 0.63 | 0.67 | 0.71 | 0.75 | | 6.8% | 8.5% | |

Average **9.5%**

$$P_0 = \sum_{t=1}^n \frac{D_t}{(1+K)^t} + \frac{D_n(1+g_n)}{K-g_n} \left[\frac{1}{(1+K)} \right]^n$$

Where : P₀ = current stock price
 D_t = dividends expected during stage 1
 K = cost of equity
 n = years of non - constant growth
 D_n = dividend expected in year n
 g_n = constant rate of growth expected after year n

1 [B] see schedule PMC-8
 2 Derived from Value Line Information
 3 Average annual growth in GDP 1929 - 2005 in current dollars.
 4 Internal Rate of Return of Projected Dividends

Sun City Water Districts
Capital Structure Including the Tolleson Obligation
And Weighted Average Cost of Capital

| [A] | [B] | [C] | [D] |
|--|-------------------|-------------------|----------------------|
| <u>Description</u> | <u>Weight (%)</u> | <u>Cost</u> | <u>Weighted Cost</u> |
| Structure including Tolleson Obligation Debt | 61.9% | 5.5% ¹ | 3.4% |
| Common Equity | 38.1% | 10.8% | 4.1% |
| Weighted Average Cost of Capital/ROR | | | 7.5% |

[D] : [B] x [C]

1: Note that the Tolleson Obligation is included for the calculation of the cost of debt, resulting in a cost of debt 10 basis points lower than as shown in Schedule SPI-1.

| Applicant's Cost of Debt (Including the Tolleson Obligation) | | | | |
|---|--|------------------------|----------------------|---------------|
| | <u>Amount outstanding</u> <u>as of 10/31/2007</u> | <u>Annual Interest</u> | <u>Interest Rate</u> | <u>Weight</u> |
| Long-Term Debt | | | | |
| Aug '08 L-T Senior Notes | \$ 4,519,474 | 321,877 | 7.122% | |
| Sept '13 PILR - Monterey | 41,323 | 2,587 | 6.260% | |
| Aug '13 PILR - Montex/Lincoln | 23,036 | 1,327 | 5.761% | |
| Aug '15 PILR - Rosalee | 43,340 | 3,112 | 7.180% | |
| Aug '15 PILR - T.O. Development | 37,123 | 2,665 | 7.179% | |
| Sept '28 L-T Note - Maricopa | 10,635,000 | 386,051 | 3.630% | |
| Dec '13 L-T Promissory Note | 24,700,000 | 1,331,330 | 5.390% | |
| Dec '16 L-T Promissory Note | 11,200,000 | 618,240 | 5.520% | |
| Dec '18 L-T Promissory Note | 123,100,000 | 6,918,220 | 5.620% | |
| Fall 2037 L-T Promissory Note | 10,000,000 | 650,000 | 6.500% | |
| Fall 2037 L-T Promissory Note | 6,450,000 | 425,249 | 6.593% | |
| Tolleson Obligation ² | 8,560,000 | 280,768 | 3.280% | |
| Phoenix Interconnection Agreement | 3,000,000 | - | 0.000% | |
| Long-Term Debt | 202,309,296 | 10,941,425 | 5.408% | 54.3% |
| Short-Term Debt | | | | |
| Short-Term Debt | 28,124,006 | 1,617,974 | 5.753% | |
| Short-Term Debt | 28,124,006 | 1,617,974 | 5.753% | 7.5% |
| Total Debt | \$ 230,433,302 | \$ 12,559,399 | 5.450% | 61.9% |

| Applicant's Equity | |
|-----------------------------|--|
| | <u>Amount outstanding</u> <u>as of 10/31/2007</u> |
| Common Equity | |
| Common Stock | 522,880 |
| Paid in Capital | 149,468,228 |
| Retained Earnings | (22,888,723) |
| 2007 Equity Infusion | 15,000,000 |
| Total Common Equity | \$ 142,102,385 |
| Total Capitalization | \$ 372,535,687 |
| | 38.1% |
| | 100% |

| Applicant's Cost of Debt (Excluding the Tolleson Obligation) | | | | |
|---|---------------------------|------------------------|----------------------|---------------|
| | <u>Amount outstanding</u> | <u>Annual Interest</u> | <u>Interest Rate</u> | <u>Weight</u> |
| | <u>10/31/2007</u> | | | |
| Long-Term Debt | | | | |
| Aug '08 L-T Senior Notes | \$ 4,519,474 | 321,877 | 7.122% | |
| Sept '13 PILR - Monterey | 41,323 | 2,587 | 6.260% | |
| Aug '13 PILR - Montex/Lincoln | 23,036 | 1,327 | 5.761% | |
| Aug '15 PILR - Rosalee | 43,340 | 3,112 | 7.180% | |
| Aug '15 PILR - T.O. Development | 37,123 | 2,665 | 7.179% | |
| Sept '28 L-T Note - Maricopa | 10,635,000 | 386,051 | 3.630% | |
| Dec '13 L-T Promissory Note | 24,700,000 | 1,331,330 | 5.390% | |
| Dec '16 L-T Promissory Note | 11,200,000 | 618,240 | 5.520% | |
| Dec '18 L-T Promissory Note | 123,100,000 | 6,918,220 | 5.620% | |
| Fall 2037 L-T Promissory Note | 10,000,000 | 650,000 | 6.500% | |
| Fall 2037 L-T Promissory Note | 6,450,000 | 425,249 | 6.593% | |
| Phoenix Interconnection Agreement | 3,000,000 | - | 0.000% | |
| Long-Term Debt | 193,749,296 | 10,660,657 | 5.502% | 53.2% |
| Short-Term Debt | | | | |
| Short-Term Debt | 28,124,006 | 1,617,974 | 5.753% | |
| Short-Term Debt | 28,124,006 | 1,617,974 | 5.753% | 7.7% |
| Total Debt | \$ 221,873,302 | \$ 12,278,631 | 5.534% | 61.0% |

| Applicant's Equity | | |
|-----------------------------|---------------------------|--------------|
| | <u>Amount outstanding</u> | |
| | <u>10/31/2007</u> | |
| Common Equity | | |
| Common Stock | 522,880 | |
| Paid in Capital | 149,468,228 | |
| Retained Earnings | (22,888,723) | |
| 2007 Equity Infusion | 15,000,000 | |
| Total Common Equity | \$ 142,102,385 | |
| Total Capitalization | \$ 363,975,687 | |
| | | 39.0% |
| | | 100% |

BEFORE THE ARIZONA CORPORATION COMMISSION

MIKE GLEASON
Chairman
WILLIAM A. MUNDELL
Commissioner
JEFF HATCH-MILLER
Commissioner
KRISTIN K. MAYES
Commissioner
GARY PIERCE
Commissioner

IN THE MATTER OF THE APPLICATION OF) DOCKET NO. W-01303A-07-0209
ARIZONA AMERICAN WATER COMPANY)
FOR A DETERMINATION OF THE CURRENT)
FAIR VALUE OF ITS UTILITY PLANT AND)
PROPERTY AND FOR INCREASES IN ITS)
RATES AND CHARGES BASED THEREON)
FOR UTILITY SERVICE BY ITS SUN CITY)
WATER DISTRICT)

SURREBUTTAL
TESTIMONY
OF
STEVEN P. IRVINE
PUBLIC UTILITIES ANALYST IV
UTILITIES DIVISION
ARIZONA CORPORATION COMMISSION

DECEMBER 14, 2007

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| II. RESPONSE TO TESTIMONY OF MR. THOMAS M. BRODERICK | 2 |
| III. UPDATED RATE DESIGN | 2 |
| IV. SUMMARY OF STAFF RECOMMENDATION | 2 |

SCHEDULES

| | |
|-----------------------------|-------|
| Rate Design | SPI-3 |
| Typical Bill Analysis | SPI-4 |

**EXECUTIVE SUMMARY
ARIZONA-AMERICAN WATER COMPANY
DOCKET NO. W-01303A-07-0209**

The Surrebuttal Testimony of Staff witness Steve Irvine addresses the following issues:

Response to the Rebuttal Testimony of Applicant's witness Mr. Thomas M. Broderick

Mr. Broderick's Rebuttal Testimony describes that the Company accepts Staff's recommendation to reduce the break-over points as per schedule SPI-1. No other comments appear to be made regarding Staff's recommended rate design. No discussion or objections relative to rate design appear to be made that would call for a response through Surrebuttal Testimony.

Staff's updated rate design

Staff's recommend rate design would generate Staff's recommended \$9,632,551 revenue requirement, a 25 percent increase over the test year. The typical 5/8-inch meter residential bill with median use of 6,431 gallons would increase by \$2.89, or 24.29 percent, from \$11.88 to \$14.77.

1 **I. INTRODUCTION**

2 **Q. Please state your name, occupation, and business address.**

3 A. My name is Steve Irvine. I am a Public Utilities Analyst employed by the Arizona
4 Corporation Commission ("ACC" or "Commission") in the Utilities Division ("Staff").
5 My business address is 1200 West Washington Street, Phoenix, Arizona 85007.

6

7 **Q. Did you previously file Direct Testimony regarding rate design in this case?**

8 A. Yes.

9

10 **Q. What matters are addressed in your rate design Surrebuttal Testimony?**

11 A. This rate design Surrebuttal Testimony addresses comments contained in the Rebuttal
12 Testimony of Arizona-American Water Company ("Arizona American" or "Company")
13 witness Mr. Thomas M. Broderick. This Surrebuttal also presents rates designed to
14 generate Staff's Surrebuttal revenue requirement (Schedule SPI-3). Staff also presents an
15 updated typical billing analysis (Schedule SPI-4).

16

17 **Q. Please explain how Staff's rate design Surrebuttal Testimony is organized.**

18 A. Staff's rate design Surrebuttal Testimony is presented in three sections. Section I is this
19 introduction. Section II discusses the Rebuttal Testimony of Mr. Thomas M. Broderick.
20 Section III addresses Staff's updated rate design. Section IV contains Staff's
21 recommendation.

22

1 **II. RESPONSE TO TESTIMONY OF MR. THOMAS M. BRODERICK**

2 **Q. What comments does the Company make in Rebuttal Testimony regarding Staff's**
3 **proposed rate design?**

4 A. Mr. Broderick's Rebuttal Testimony describes that the Company accepts Staff's
5 recommendation to reduce the break-over points as per schedule SPI-1.¹ No other
6 comments appear to be made regarding Staff's recommended rate design. No discussion
7 or objections relative to rate design appear to be made that would call for a response
8 through surrebuttal testimony.

9
10 **III. UPDATED RATE DESIGN**

11 **Q. Has Staff updated its recommended rate design to reflect its Surrebuttal revenue**
12 **requirement?**

13 A. Yes. Staff's Surrebuttal rate design presented in Schedule SPI-3 is revised to reflect
14 Staff's \$9,632,551 Surrebuttal revenue requirement, a 25 percent increase over the test
15 year. Under Staff's recommended rate design, the typical 5/8-inch meter residential bill
16 with median use of 6,431 gallons would increase by \$2.89, or 24.29 percent, from \$11.88
17 to \$14.77.

18
19 **IV. SUMMARY OF STAFF RECOMMENDATION**

20 **Q. Please provide a brief summary of Staff's recommendation.**

21 A. Staff recommends approval of its recommended rates shown in Schedule SPI-3.

22
23 **Q. Does this conclude your Surrebuttal Testimony?**

24 A. Yes, it does.

¹ Rebuttal Testimony of Mr. Thomas M. Broderick. Page 18.

RATE DESIGN

| Monthly Usage Charge | Present Rates | Company Proposed Rates | Staff Recommended Rates |
|------------------------------|---------------|------------------------|-------------------------|
| 5/8" Meter - Residential | \$ 6.33 | \$ 8.20 | \$ 8.03 |
| 3/4" Meter - Residential | 6.33 | 8.20 | 8.03 |
| 1" Meter - Residential | 16.40 | 20.50 | 20.57 |
| 1½" Meter - Residential | 33.77 | 41.00 | 41.13 |
| 2" Meter - Residential | 51.14 | 65.60 | 65.81 |
| 3" Meter - Residential | 86.84 | 131.20 | 131.62 |
| 4" Meter - Residential | 135.00 | 205.00 | 205.65 |
| 6" Meter - Residential | 178.51 | 410.00 | 411.31 |
| 8" Meter - Residential | 350.00 | 656.00 | 658.10 |
| 5/8" Meter - Commercial | \$ 6.33 | \$ 8.20 | \$ 8.03 |
| 3/4" Meter - Commercial | 6.33 | 8.20 | 8.03 |
| 1" Meter - Commercial | 16.40 | 20.50 | 20.57 |
| 1½" Meter - Commercial | 33.77 | 41.00 | 41.13 |
| 2" Meter - Commercial | 51.14 | 65.60 | 65.81 |
| 3" Meter - Commercial | 86.84 | 131.20 | 131.62 |
| 4" Meter - Commercial | 135.00 | 205.00 | 205.65 |
| 6" Meter - Commercial | 178.51 | 410.00 | 411.31 |
| 8" Meter - Commercial | 350.00 | 656.00 | 658.10 |
| Irrigation 1" | 16.46 | 20.50 | 20.57 |
| Irrigation 1.5" | 33.78 | 41.00 | 41.13 |
| Irrigation 2" | 51.15 | 65.60 | 65.81 |
| Irrigation 3" | 86.87 | 131.20 | 131.62 |
| Irrigation 4" | 135.00 | 205.00 | 205.65 |
| Irrigation 6" | 178.56 | 410.00 | 411.31 |
| Private Fire 3" | 7.60 | 11.48 | 11.22 |
| Private Fire 4" | 11.39 | 17.30 | 17.36 |
| Private Fire 6" | 15.83 | 36.35 | 36.47 |
| Private Fire 8" | 25.32 | 47.46 | 47.61 |
| Private Fire 10" | 39.35 | 68.34 | 68.34 |
| Public Interruptible 3" | 4.59 | 6.93 | 6.95 |
| Public Interruptible 8" | 4.59 | 6.93 | 6.95 |
| Standby - City of Peoria | 4.62 | 6.98 | 7.00 |
| Central Arizona Project Raw | - | - | - |
| Commodity Rates | | | |
| 5/8" Meter (Residential) | | | |
| From 1 to 4,000 Gallons | \$ 0.7200 | \$ 0.9350 | N/A |
| From 4,001 to 18,000 Gallons | \$ 1.1000 | \$ 1.4280 | N/A |
| Over 18,000 Gallons | \$ 1.3160 | \$ 1.7100 | N/A |
| From 1 to 3,000 Gallons | N/A | N/A | \$ 0.7223 |
| From 3,001 to 10,000 Gallons | N/A | N/A | \$ 1.3342 |
| Over 10,000 Gallons | N/A | N/A | \$ 1.6653 |
| 3/4" Meter (Residential) | | | |
| From 1 to 4,000 Gallons | \$ 0.7200 | \$ 0.9350 | N/A |
| From 4,001 to 18,000 Gallons | \$ 1.1000 | \$ 1.4280 | N/A |
| Over 18,000 Gallons | \$ 1.3160 | \$ 1.7100 | N/A |
| From 1 to 3,000 Gallons | N/A | N/A | \$ 0.7223 |
| From 3,001 to 10,000 Gallons | N/A | N/A | \$ 1.3342 |
| Over 10,000 Gallons | N/A | N/A | \$ 1.6653 |
| 5/8" Meter (Commercial) | | | |
| From 1 to 18,000 Gallons | \$ 1.1000 | \$ 1.4280 | N/A |
| Over 18,000 Gallons | \$ 1.3160 | \$ 1.7100 | N/A |
| From 1 to 10,000 Gallons | N/A | N/A | \$ 1.3342 |
| Over 10,000 Gallons | N/A | N/A | \$ 1.6653 |

| Monthly Usage Charge | Present Rates | Company Proposed Rates | Staff Recommended Rates |
|------------------------------------|---------------|------------------------|-------------------------|
| 3/4" Meter (Commercial) | | | |
| From 1 to 18,000 Gallons | \$ 1.1000 | \$ 1.4280 | N/A |
| Over 18,000 Gallons | \$ 1.3160 | \$ 1.7100 | N/A |
| From 1 to 10,000 Gallons | N/A | N/A | \$ 1.3342 |
| From 10,001 to 10,000 Gallons | N/A | N/A | \$ 1.6653 |
| 1" Meter (Res., Comm.) | | | |
| From 1 to 60,000 Gallons | \$ 1.1000 | \$ 1.4280 | N/A |
| Over 60,000 Gallons | \$ 1.3160 | \$ 1.7100 | N/A |
| From 1 to 46,000 Gallons | N/A | N/A | \$ 1.3342 |
| Over 46,000 Gallons | N/A | N/A | \$ 1.6653 |
| 1 1/2" Meter (Res., Comm.) | | | |
| From 1 to 125,000 Gallons | \$ 1.1000 | \$ 1.4280 | N/A |
| Over 125,000 Gallons | \$ 1.3160 | \$ 1.7100 | N/A |
| From 1 to 106,000 Gallons | N/A | N/A | \$ 1.3342 |
| Over 106,000 Gallons | N/A | N/A | \$ 1.6653 |
| 2" Meter (Res., Comm.) | | | |
| From 1 to 190,000 Gallons | \$ 1.1000 | \$ 1.4280 | N/A |
| Over 190,000 Gallons | \$ 1.3160 | \$ 1.7100 | N/A |
| From 1 to 175,000 Gallons | N/A | N/A | \$ 1.3342 |
| Over 175,000 Gallons | N/A | N/A | \$ 1.6653 |
| 3" Meter (Res., Comm.) | | | |
| From 1 to 340,000 Gallons | \$ 1.1000 | \$ 1.4280 | N/A |
| Over 340,000 Gallons | \$ 1.3160 | \$ 1.7100 | N/A |
| From 1 to 340,000 Gallons | N/A | N/A | \$ 1.3342 |
| Over 340,000 Gallons | N/A | N/A | \$ 1.6653 |
| 4" Meter (Res., Comm.) | | | |
| From 1 to 550,000 Gallons | \$ 1.1000 | \$ 1.4280 | N/A |
| Over 550,000 Gallons | \$ 1.3160 | \$ 1.7100 | N/A |
| From 1 to 550,000 Gallons | N/A | N/A | \$ 1.3342 |
| Over 550,000 Gallons | N/A | N/A | \$ 1.6653 |
| 6" Meter (Res., Comm.) | | | |
| From 1 to 700,000 Gallons | \$ 1.1000 | \$ 1.4280 | N/A |
| Over 700,000 Gallons | \$ 1.3160 | \$ 1.7100 | N/A |
| From 1 to 700,000 Gallons | N/A | N/A | \$ 1.3342 |
| Over 700,000 Gallons | N/A | N/A | \$ 1.6653 |
| 8" Meter (Res., Comm.) | | | |
| From 1 to 1,450,000 Gallons | \$ 1.1000 | \$ 1.4280 | N/A |
| Over 1,450,000 Gallons | \$ 1.3160 | \$ 1.7100 | N/A |
| From 1 to 1,430,000 Gallons | N/A | N/A | \$ 1.3342 |
| Over 1,430,000 Gallons | N/A | N/A | \$ 1.6653 |
| Irrigation 1" | | | |
| All Gallons | \$ 0.8200 | \$ 1.0645 | \$ 1.0679 |
| Irrigation 1.5" | | | |
| All Gallons | 0.8200 | 1.0645 | 1.0679 |
| Irrigation 2" | | | |
| All Gallons | 0.8200 | 1.0645 | 1.0679 |
| Irrigation 3" | | | |
| All Gallons | 0.8200 | 1.0645 | 1.0679 |
| Irrigation 4" | | | |
| All Gallons | 0.8200 | 1.0645 | 1.0679 |
| Irrigation 6" | | | |
| All Gallons | 0.8200 | 1.0645 | 1.0679 |
| Private Fire 3" | | | |
| All Gallons | 0.7600 | 0.9866 | 0.9898 |
| Private Fire 4" | | | |
| All Gallons | 0.7600 | 0.9866 | 0.9898 |
| Private Fire 6" | | | |
| All Gallons | 0.7600 | 0.9866 | 0.9898 |
| Private Fire 8" | | | |
| All Gallons | 0.7600 | 0.9866 | 0.9898 |
| Private Fire 10" | | | |
| All Gallons | 0.7600 | 0.9866 | 0.9898 |
| Public Interruptible 3" | | | |
| All Gallons | \$ 0.6300 | \$ 0.8179 | \$ 0.9898 |
| Public Interruptible 8" | | | |
| All Gallons | 0.6300 | 0.8179 | 0.9898 |
| Standby - City of Peoria | | | |
| All Gallons | 0.7600 | 0.9866 | 0.9898 |
| Central Arizona Project Raw | | | |
| All Gallons | 0.6558 | 0.8513 | 0.8540 |

| Service Line and Meter Installation Charges | Present Rates | | | Company Proposed Rates | | | Staff Recommended Rates | | |
|---|--|--------|----------|---------------------------|--------|----------|----------------------------|--------|----------|
| | Line | Meter | Total | Line | Meter | Total | Line | Meter | Total |
| 5/8" Meter | \$ 370 | \$ 130 | \$ 500 | \$ 370 | \$ 130 | \$ 500 | \$ 370 | \$ 130 | \$ 500 |
| 3/4" Meter | 370 | 205 | 575 | 370 | 205 | 575 | 370 | 205 | 575 |
| 1" Meter | 420 | 240 | 660 | 420 | 240 | 660 | 420 | 240 | 660 |
| 1½" Meter | 450 | 450 | 900 | 450 | 450 | 900 | 450 | 450 | 900 |
| 2" Turbine Meter | 580 | 945 | 1,525 | 580 | 945 | 1,525 | 580 | 945 | 1,525 |
| 2" Compound Meter | 580 | 1,640 | 2,220 | 580 | 1,640 | 2,220 | 580 | 1,640 | 2,220 |
| 3" Turbine Meter | 745 | 1,420 | 2,165 | 745 | 1,420 | 2,165 | 745 | 1,420 | 2,165 |
| 3" Compound Meter | 765 | 2,195 | 2,960 | 765 | 2,195 | 2,960 | 765 | 2,195 | 2,960 |
| 4" Turbine Meter | 1,090 | 2,270 | 3,360 | 1,090 | 2,270 | 3,360 | 1,090 | 2,270 | 3,360 |
| 4" Compound Meter | 1,120 | 3,145 | 4,265 | 1,120 | 3,145 | 4,265 | 1,120 | 3,145 | 4,265 |
| 6" Turbine Meter | 1,610 | 4,425 | 6,035 | 1,610 | 4,425 | 6,035 | 1,610 | 4,425 | 6,035 |
| 6" Compound Meter | 1,630 | 6,120 | 7,750 | 1,630 | 6,120 | 7,750 | 1,630 | 6,120 | 7,750 |
| Over 6" | | | | Cost | Cost | Cost | Cost | Cost | Cost |
| Service Charges | | | | | | | | | |
| Establishment and/or reconnection | | | \$ 30.00 | | | \$ 30.00 | | | \$ 30.00 |
| Establishment and/or reconnection (After Hours) | | | 40.00 | | | 40.00 | | | 40.00 |
| Meter Test | | | 10.00 | | | 10.00 | | | 10.00 |
| NSF Check | | | 10.00 | | | 10.00 | | | 10.00 |
| Meter Re-Read | | | 5.00 | | | 5.00 | | | 5.00 |
| Deposit | | | (a) | | | (a) | | | (a) |
| Deposit Interest | | | (a) | | | (a) | | | (a) |
| Collection of any privilege, sales, use and franchise taxes | | | (b) | | | (b) | | | (b) |
| (a) | Per Commission Rule A.A.C. R-14-2-403B | | | | | | | | |
| (b) | Per Commission Rule A.A.C. R-14-2-409D | | | | | | | | |

TYPICAL BILL ANALYSIS AVERAGE AND MEDIAN COST COMPARISONS

| LINE NO. | CUSTOMER CLASS | CURRENT RATES | | | |
|----------|--|---------------|-------------|-----------|-------------|
| | | AVERAGE | | MEDIAN | |
| | | USAGE | DOLLARS | USAGE | DOLLARS |
| 1 | Residential 5/8" | 8,269 | \$ 13.91 | 6,431 | \$ 11.88 |
| 2 | Residential 3/4" | 8,269 | \$ 13.91 | 6,431 | \$ 11.88 |
| 3 | Residential 1" | 19,791 | \$ 38.17 | 8,586 | \$ 25.84 |
| 4 | Residential 1.5" | 71,637 | \$ 112.57 | 57,843 | \$ 97.40 |
| 5 | Residential 2" | 91,303 | \$ 151.57 | 63,613 | \$ 121.11 |
| 6 | Residential 3" | 204,575 | \$ 311.87 | 210,281 | \$ 318.15 |
| 7 | Residential 4" | N/A | N/A | N/A | N/A |
| 8 | Residential 6" | 81,513 | \$ 268.17 | 44,500 | \$ 227.46 |
| 9 | Residential 8" | N/A | N/A | N/A | N/A |
| 10 | | | | | |
| 11 | Commerical 5/8" | 6,722 | \$ 13.72 | 1,230 | \$ 7.68 |
| 12 | Commercial 3/4" | 6,722 | \$ 13.72 | 1,230 | \$ 7.68 |
| 13 | Commerical 1" | 21,916 | \$ 40.51 | 9,650 | \$ 27.02 |
| 14 | Commerical 1.5" | 51,027 | \$ 89.90 | 19,188 | \$ 54.88 |
| 15 | Commerical 2" | 103,262 | \$ 164.73 | 58,278 | \$ 115.25 |
| 16 | Commerical 3" | 253,459 | \$ 365.64 | 96,000 | \$ 192.44 |
| 17 | Commercial 4" | 957,823 | \$ 1,276.70 | 773,500 | \$ 1,034.13 |
| 18 | Commercial 6" | 3,365,733 | \$ 4,456.61 | 1,212,500 | \$ 1,622.96 |
| 19 | Commercial 8" | N/A | N/A | N/A | N/A |
| 20 | | | | | |
| 21 | Irrigation 1" | 290,865 | \$ 254.97 | 225,500 | \$ 201.37 |
| 22 | Irrigation 1.5" | N/A | N/A | N/A | N/A |
| 23 | Irrigation 2" | 364,664 | \$ 350.17 | 34,500 | \$ 79.44 |
| 24 | Irrigation 3" | N/A | N/A | N/A | N/A |
| 25 | Irrigation 4" | N/A | N/A | N/A | N/A |
| 26 | Irrigation 6" | N/A | N/A | N/A | N/A |
| 27 | | | | | |
| 28 | Private Fire 3" | - | \$ 7.60 | - | \$ 7.60 |
| 29 | Private Fire 4" | - | \$ 11.39 | - | \$ 11.39 |
| 30 | Private Fire 6" | - | \$ 15.83 | - | \$ 15.83 |
| 31 | Private Fire 8" | - | \$ 25.32 | - | \$ 25.32 |
| 32 | Private Fire 10" | N/A | N/A | N/A | N/A |
| 33 | | | | | |
| 34 | Public Interruptible 3" | N/A | N/A | N/A | N/A |
| 35 | Public Interruptible 8" Standby - City of | - | \$ 4.59 | - | \$ 4.59 |
| 36 | Peoria Central Arizona | N/A | N/A | N/A | N/A |
| 37 | Project Raw | 547,698 | \$ 359.18 | 70,214 | \$ 46.05 |
| 38 | | | | | |

*Average and median billing data for 5/8" and 3/4" has been combined

| LINE NO. | CUSTOMER CLASS | COMPANY RECOMMENDED | | | | | |
|----------|-----------------------------|---------------------|-------------|---------|-------------|-----------|---------|
| | | AVERAGE | | | MEDIAN | | |
| | | AVERAGE | CHANGE | PERCENT | MEDIAN | CHANGE | PERCENT |
| 39 | Residential 5/8" | \$ 18.04 | \$ 4.13 | 29.70% | \$ 15.41 | \$ 3.53 | 29.68% |
| 40 | Residential 3/4" | \$ 18.04 | \$ 4.13 | 29.70% | \$ 15.41 | \$ 3.53 | 29.68% |
| 41 | Residential 1" | \$ 48.76 | \$ 10.59 | 27.75% | \$ 32.76 | \$ 6.92 | 26.76% |
| 42 | Residential 1.5" | \$ 143.30 | \$ 30.73 | 27.30% | \$ 123.60 | \$ 26.20 | 26.90% |
| 43 | Residential 2" | \$ 195.98 | \$ 44.41 | 29.30% | \$ 156.44 | \$ 35.33 | 29.17% |
| 44 | Residential 3" | \$ 423.33 | \$ 111.46 | 35.74% | \$ 431.48 | \$ 113.33 | 35.62% |
| 45 | Residential 4" | N/A | N/A | N/A | N/A | N/A | N/A |
| 46 | Residential 6" | \$ 526.40 | \$ 258.23 | 96.29% | \$ 473.55 | \$ 246.09 | 108.19% |
| 47 | Residential 8" | N/A | N/A | N/A | N/A | N/A | N/A |
| 48 | | | | | | | |
| 49 | Commerical 5/8" | \$ 17.80 | \$ 4.07 | 29.69% | \$ 9.96 | \$ 2.27 | 29.59% |
| 50 | Commercial 3/4" | \$ 17.80 | \$ 4.07 | 29.69% | \$ 9.96 | \$ 2.27 | 29.59% |
| 51 | Commerical 1" | \$ 51.80 | \$ 11.29 | 27.87% | \$ 34.28 | \$ 7.27 | 26.89% |
| 52 | Commerical 1.5" | \$ 113.87 | \$ 23.97 | 26.66% | \$ 68.40 | \$ 13.52 | 24.64% |
| 53 | Commerical 2" | \$ 213.06 | \$ 48.33 | 29.34% | \$ 148.82 | \$ 33.58 | 29.13% |
| 54 | Commerical 3" | \$ 493.14 | \$ 127.49 | 34.87% | \$ 268.29 | \$ 75.85 | 39.41% |
| 55 | Commercial 4" | \$ 1,687.78 | \$ 411.08 | 32.20% | \$ 1,372.59 | \$ 338.46 | 32.73% |
| 56 | Commercial 6" | \$ 5,968.00 | \$ 1,511.39 | 33.91% | \$ 2,285.98 | \$ 663.02 | 40.85% |
| 57 | Commercial 8" | N/A | N/A | N/A | N/A | N/A | N/A |
| 58 | | | | | | | |
| 59 | Irrigation 1" | \$ 330.13 | \$ 75.16 | 29.48% | \$ 260.54 | \$ 59.17 | 29.39% |
| 60 | Irrigation 1.5" | N/A | N/A | N/A | N/A | N/A | N/A |
| 61 | Irrigation 2" | \$ 453.78 | \$ 103.61 | 29.59% | \$ 102.33 | \$ 22.89 | 28.81% |
| 62 | Irrigation 3" | N/A | N/A | N/A | N/A | N/A | N/A |
| 63 | Irrigation 4" | N/A | N/A | N/A | N/A | N/A | N/A |
| 64 | Irrigation 6" | N/A | N/A | N/A | N/A | N/A | N/A |
| 65 | | | | | | | |
| 66 | Private Fire 3" | \$ 11.48 | \$ 3.88 | 51.05% | \$ 11.48 | \$ 3.88 | 51.05% |
| 67 | Private Fire 4" | \$ 17.30 | \$ 5.91 | 51.89% | \$ 17.30 | \$ 5.91 | 51.89% |
| 68 | Private Fire 6" | \$ 36.35 | \$ 20.52 | 129.63% | \$ 36.35 | \$ 20.52 | 129.63% |
| 69 | Private Fire 8" | \$ 47.46 | \$ 22.14 | 87.44% | \$ 47.46 | \$ 22.14 | 87.44% |
| 70 | Private Fire 10" | N/A | N/A | N/A | N/A | N/A | N/A |
| 71 | | | | | | | |
| 72 | Public Interruptible 3" | N/A | N/A | N/A | N/A | N/A | N/A |
| 73 | Public Interruptible 8" | \$ 6.93 | \$ 2.34 | 50.98% | \$ 6.93 | \$ 2.34 | 50.98% |
| 74 | Standby - City of Peoria | N/A | N/A | N/A | N/A | N/A | N/A |
| 75 | Central Arizona Project Raw | \$ 466.26 | \$ 107.07 | 29.81% | \$ 59.77 | \$ 13.73 | 29.81% |
| 76 | | | | | | | |

*Average and median billing data for 5/8" and 3/4" has been combined

| LINE NO. | CUSTOMER CLASS | STAFF RECOMMENDED | | | | | |
|----------|-----------------------------|-------------------|-------------|---------|-------------|-----------|---------|
| | | AVERAGE | | | MEDIAN | | |
| | | AVERAGE | CHANGE | PERCENT | MEDIAN | CHANGE | PERCENT |
| 77 | Residential 5/8" | \$ 17.22 | \$ 3.32 | 23.85% | \$ 14.77 | \$ 2.89 | 24.29% |
| 78 | Residential 3/4" | \$ 17.22 | \$ 3.32 | 23.85% | \$ 14.77 | \$ 2.89 | 24.29% |
| 79 | Residential 1" | \$ 46.97 | \$ 8.80 | 23.06% | \$ 32.02 | \$ 6.18 | 23.90% |
| 80 | Residential 1.5" | \$ 136.71 | \$ 24.14 | 21.45% | \$ 118.31 | \$ 20.91 | 21.47% |
| 81 | Residential 2" | \$ 187.63 | \$ 36.06 | 23.79% | \$ 150.69 | \$ 29.57 | 24.42% |
| 82 | Residential 3" | \$ 404.57 | \$ 92.70 | 29.72% | \$ 412.19 | \$ 94.04 | 29.56% |
| 83 | Residential 4" | N/A | N/A | N/A | N/A | N/A | N/A |
| 84 | Residential 6" | \$ 520.07 | \$ 251.89 | 93.93% | \$ 470.68 | \$ 243.22 | 106.93% |
| 85 | Residential 8" | N/A | N/A | N/A | N/A | N/A | N/A |
| 86 | | | | | | | |
| 87 | Commerical 5/8" | \$ 16.99 | \$ 3.27 | 23.83% | \$ 9.67 | \$ 1.98 | 25.82% |
| 88 | Commercial 3/4" | \$ 16.99 | \$ 3.27 | 23.83% | \$ 9.67 | \$ 1.98 | 25.82% |
| 89 | Commerical 1" | \$ 49.81 | \$ 9.30 | 22.96% | \$ 33.44 | \$ 6.43 | 23.79% |
| 90 | Commerical 1.5" | \$ 109.21 | \$ 19.31 | 21.48% | \$ 66.73 | \$ 11.86 | 21.60% |
| 91 | Commerical 2" | \$ 203.59 | \$ 38.86 | 23.59% | \$ 143.57 | \$ 28.32 | 24.57% |
| 92 | Commerical 3" | \$ 469.80 | \$ 104.15 | 28.48% | \$ 259.71 | \$ 67.27 | 34.95% |
| 93 | Commercial 4" | \$ 1,618.64 | \$ 341.95 | 26.78% | \$ 1,311.69 | \$ 277.56 | 26.84% |
| 94 | Commercial 6" | \$ 5,784.54 | \$ 1,327.92 | 29.80% | \$ 2,198.75 | \$ 575.79 | 35.48% |
| 95 | Commercial 8" | N/A | N/A | N/A | N/A | N/A | N/A |
| 96 | | | | | | | |
| 97 | Irrigation 1" | \$ 331.18 | \$ 76.21 | 29.89% | \$ 261.38 | \$ 60.01 | 29.80% |
| 98 | Irrigation 1.5" | N/A | N/A | N/A | N/A | N/A | N/A |
| 99 | Irrigation 2" | \$ 455.23 | \$ 105.06 | 30.00% | \$ 102.65 | \$ 23.21 | 29.22% |
| 100 | Irrigation 3" | N/A | N/A | N/A | N/A | N/A | N/A |
| 101 | Irrigation 4" | N/A | N/A | N/A | N/A | N/A | N/A |
| 102 | Irrigation 6" | N/A | N/A | N/A | N/A | N/A | N/A |
| 103 | | | | | | | |
| 104 | Private Fire 3" | \$ 11.22 | \$ 3.62 | 47.58% | \$ 11.22 | \$ 3.62 | 47.58% |
| 105 | Private Fire 4" | \$ 17.36 | \$ 5.97 | 52.37% | \$ 17.36 | \$ 5.97 | 52.37% |
| 106 | Private Fire 6" | \$ 36.47 | \$ 20.64 | 130.36% | \$ 36.47 | \$ 20.64 | 130.36% |
| 107 | Private Fire 8" | \$ 47.61 | \$ 22.29 | 88.04% | \$ 47.61 | \$ 22.29 | 88.04% |
| 108 | Private Fire 10" | N/A | N/A | N/A | N/A | N/A | N/A |
| 109 | | | | | | | |
| 110 | Public Interruptible 3" | N/A | N/A | N/A | N/A | N/A | N/A |
| 111 | Public Interruptible 8" | \$ 6.95 | \$ 2.36 | 51.46% | \$ 6.95 | \$ 2.36 | 51.46% |
| 112 | Standby - City of Peoria | N/A | N/A | N/A | N/A | N/A | N/A |
| 113 | Central Arizona Project Raw | \$ 467.74 | \$ 108.56 | 30.23% | \$ 59.96 | \$ 13.92 | 30.23% |
| 114 | | | | | | | |

*Average and median billing data for 5/8" and 3/4" has been combined